REMARKS

Applicants have carefully considered the January 31, 2007 Office Action, and the comments that follow are presented in a bona fide effort to address all issues raised in that Action and thereby place this case in condition for allowance. Claims 1-5 are pending in this application. In response to the Office Action dated January 31, 2007, no claims have been amended. Entry of the present response is respectfully solicited. It is believed that this response places this case in condition for allowance. Hence, prompt favorable reconsideration of this case is solicited.

Claims 1-5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kusakari et al. (U.S. Pat. App. Pub. No. 2003/00725545, hereinafter "Kusakari") in view of Nakasone et al. (U.S. Pat. No. 4,725,453, hereinafter "Nakasone"). Applicants respectfully traverse.

Independent claim 1 describes a method of manufacturing an optical cable. The method includes extruding a thermoplastic resin around at least one tension member and at least one optical fiber. The tension member is a fiber reinforced plastic having a matrix resin containing styrene. The temperature of the thermoplastic resin during extrusion is in the range of 160° C. to 190° C.

The Office action admitted that neither Kusakari nor Nakasone discloses the foregoing processing temperature recited in claim 1. The Examiner asserted that generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical.

The requisite motivation to support the ultimate legal conclusion of obviousness under 35 U.S.C. § 103 requires not only a suggestion but a reasonable expectation of success as to a

particular benefit. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). The Examiner's "obvious to try" standard is not the legal standard. *In re O'Farrell*, 853 F.2d 894, 7 USPQ2d 1673 (Fed. Cir. 1988); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Dow Chemical Co.*, 837 F.2d 469, 5 USPQ2d 1529 (Fed. Cir. 1988). Thus, Applicants submit that the Examiner has failed to establish a prima facie case of obviousness and, therefore, Applicants are not required to assert critical or unexpected results since there is no case of obviousness to overcome. Nonetheless, Applicants respectfully submit that the present specification does in fact demonstrate that the present claimed temperature range of the thermoplastic resin during extrusion (between 160° C. to 190° C.) is critical.

As described in the specification at page 7, line 22 through page 8, line 3, according to an embodiment of the method of manufacturing an optical cable, the temperature of the thermoplastic resin flowing in the flow path 56 is controlled in the range of 160° C. to 190° C. during extruding with the cross head 50. In this case, the thermoplastic resin can be extruded at a temperature lower than that in conventional methods, thus decreasing the quantity of heat that is absorbed in the tension members 2 composed of the fiber-reinforced plastic (FRP). With these features, the gasifying of styrene monomers in FRP can be suppressed, thereby preventing generation of gas bubbles in the areas between tension members and sheath. See specification at page 8, lines 6 to 9 and lines 16 to 19.

The present claimed subject matter achieves an advantage in which impairment of an optical cable due to bumpy surfaced and deterioration of transmission loss of the optical fiber due to pressure from sheath containing bubbles can be prevented. The applied prior art does not even recognize such problems, much less offer any viable solution. Under such circumstances, the problems addressed and solved by the claimed invention constitute a potent indicium of

nonobviousness which must be given consideration regarding the ultimate legal conclusion of nonobviousness under 35 U.S.C. § 103. The present claimed subject matter provides a solution to the above stated problems by providing a method wherein the temperature range of the thermoplastic resin during extrusion is between 160° C. to 190° C.

Moreover, Table 1 of the specification (at page 11) and the related portion of the present specification, describe that if the temperature of the thermoplastic resin used for the extrusion is lower than 160° C, the gasifying of styrene monomers in FRP can be suppressed and the number of bumps can be decreased, however, the melt index of the resin become small, fluidability of the resin become poor, and friction between the resin and die which determines the shape of the products become large such that the external surface of the sheath had fine irregularities and was rough like a mat finished surface. Further, if the temperature is more than 190°C, the number of bumps increases. Further still, if the temperature is between 160°C to 190°C, all the external surfaces of the sheaths are smooth and no bump are generated, such that deterioration of transmission loss of the optical fiber can be prevented.

Reconsideration and withdrawal of the rejection are respectfully submitted in view of the foregoing remarks.

It is believed that pending claims 1-5 are now in condition for allowance. Applicants therefore respectfully request an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an Examiner's amendment, the Examiner is invited to call Applicants' representative at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper,

including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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